

REMARKS

By the present Amendment, Applicants have added new Claims 18-20 to protect additional aspects of Applicants' invention.

In the previous Office Action, claims 1-17 were rejected under 35 USC § 102(b) as anticipated by US Patent No. 5,686,902 to Reis et al ("Reis"). This rejection is respectfully traversed for the following reasons.

In order to properly anticipate Applicants' claimed invention under 35 U.S.C. §102(b), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See M.P.E.P. § 2131 (8th ed., Aug. 2001) (quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989)). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 (8th ed. 2001), p. 2100-69.

Reis is directed to a communication system for communicating with and identifying tags. The tags are associated with items located in a communication region that is interrogated by an interrogator on a one-to-many basis using broadcast commands. (see, Abstract.)

Referring, generally, to cols 13, line 40 to col 14, line 62 and corresponding Figs. 4 and 5 of Reis, a batch collection protocol is described. At the start of a tag reading cycle, an initial wake-up control period WP is used by interrogator 7 to broadcast a wake-up signal to all of the tags 8 in a tag population to be read, counted or verified. The wake-up control period is followed by a plurality of collection periods CP(1), CP(2), CP(P), to CP(p). Each collection period CP(p) consists of a synchronization period SP(p), a listen period LP(p), and an

acknowledge period $AP(p)$.

Claim 1 is drawn to a method of reading a plurality of transponders forming part of an electronic identification system also comprising a reader, the method comprising, among other things, causing the reader to lock onto a first part of a digital sequence being transmitted by one of said transponders

By contrast, in the Reis device the tags synchronize with the synchronization signal broadcast by the reader for that collection period $CP(p)$ (see column 14 lines 44 to 47). Thus, Reis fails to disclose at least "causing the reader to lock onto a first part of a digital sequence being transmitted by one of said transponders," as recited in claim 1. Accordingly, Reis cannot anticipate claim 1 under § 102(b) on at least this basis.

In addition, each of the listen periods in Reis is divided into a plurality Dp of diverse communication periods (time periods) $TS(p,1), TS(p,2) \dots TS(p,Dp)$ (See col. 16, line 65 to col. 17, line 1). Time period $TS(p,dp)$ is typical of all these time periods and is a time period provided for one tag to communicate with the interrogator. If more than one tag attempts to communicate during a time period such as $TS(p,dp)$, a communication collision may occur that will prevent successful tag-to-interrogator communication for one or more of the following tags. (see col. 17, lines 1-7).

To reduce or avoid such collisions, each tag computes a respective communication period $TS(p,dp)$ or slot based on response time time-periods computed based on a tag ID (tag-address) hashing algorithm (see col. 23 lines 58-62). The tag will then only communicate with the reader during this self allocated time period and not during any other similar time period. However, the tags in Reis are not muted by the reader immediately after the reader

has locked onto a targeted tag, but is programmed automatically to await its respective allocated time slot during the listen period to respond to the reader.

Thus Reis fails to disclose at least "causing the reader to broadcast a mute signal to mute all of said transponders not yet transmitting," as recited in claim 1. Reis fails to anticipate claim 1 under § 102(b) for this additional reason.

In addition, in the Reis system, when a tag responds, a full digital sequence is transmitted; namely, the entire sequence of a tag is transmitted within the allocated time period or slot TS(p,dp).

Accordingly, Reis fails to teach at least "causing the reader to transmit a separate first command to cause said one transponder to transmit a remainder of the sequence," as claimed. Thus, Reis fails to anticipate claim 1 under § 102(b) for this reason as well.

In the Office Action, the Examiner alleged that Reis's col. 15, lines 22-26 and col. 17, lines 43-53, disclose a reader locking onto a first part of a digital sequence, presumably, because the first of these passages refers to the communication to the reader as being "part of the sequencing." However, a careful reading of Reis reveals that what is being transmitted from the tag is not part of a digital sequence, but the entire tag identifier ID: (Reis, col. 17, lines 43-45.)

"The tag identifier IDp is a 24-bit field comprising 20 ID bits and a 4-bit format field. The format field is used to identify the nature of the tag and/or the nature of data that follows in the data field DAp."

Reis's approach is different from the Applicant's invention. In an embodiment of Applicants' invention, any small portion, for example the first few bits or the last few bits of the first part of the digital sequence (which may not include any information) is used by the reader

for synchronization. The purpose of the first part of the sequence is merely to enable the reader to lock onto and synchronize with the relevant tag.

There are therefore fundamental differences between Reis, which discloses its reader sending out a synchronization signal in advance to synchronize the tags and receives in response and from *each* tag during a respective pre-calculated time period or slot $TS(p,dp)$ in the listen period a complete ID, and the Applicants' invention on the other hand which utilizes a first part (or even a few bits of thereof) to enable the reader to synchronize with one tag trying to respond and then broadcasting a mute signal which causes the other tags to mute and thereafter transmitting a first command signal to the targeted tag instructing the targeted tag to continue with the remainder of its digital sequence which contains the information to be read.

Another novel and advantageous feature associated with implementing Applicants' invention results from the locking on by the reader within a few bits of the first part of the digital sequence, so that the "mute" signal can be sent as early as possible during the transmission of the first part, thereby muting as many other tags as possible.

Accordingly, in view of the reasons given above, claim 1 is not anticipated by Reis and the rejection thereof under § 102(b) should be withdrawn. Claims 2-9 depend directly or indirectly from allowable claim 1 and are allowable at least by virtue of such dependency.

In the Office Action, the Examiner has made certain characterizations about claims 10-17 regarding their scope which Applicants do not automatically accept. (Office Action, page 4.)

Claim 10, is directed to an electronic radio frequency identification system comprising, among other things, a controller being operative to lock into a first part of a digital sequence being transmitted by one of the transponders in a transponder population, the controller being

operative to cause a transmitter to broadcast a mute signal to mute all of said transponders not yet transmitting; the controller further being operative to cause the transmitter to transmit a separate first command to cause said one transponder to transmit a remainder of the sequence. As pointed out above in connection with claim 1, Reis fail to teach at least these elements of claim 10.

Thus, claim 10 is not anticipated by Reis and the rejection thereof under § 102(b) should be withdrawn. Claims 11-15 depend directly from allowable claim 10 and are similarly allowable, at least by virtue of such dependency.

In addition, claim 16 is directed to a reader for an electronic radio frequency identification system comprising, among other things, a receiver, a controller being operative to lock into a first part of a digital sequence being transmitted by one of a plurality of transponders; the controller being operative to cause the transmitter to broadcast a mute signal to mute all of the transponders not yet transmitting; the controller further being operative to cause the transmitter to transmit a separate first command to cause said one transponder to transmit a remainder of the sequence, and the controller causing the receiver to receive and read the remainder of the sequence. As pointed out above in connection with claim 1, Reis fail to teach at least these elements of claim 16. Claim 16 is thus not anticipated by Reis and the rejection thereof under § 102(b) should be withdrawn.

Furthermore, claim 17 is directed to a transponder for an electronic radio frequency identification system comprising, among other things, a modulator and a controller, the controller being sensitive to a mute command received from a reader and responsive thereto by muting the transponder, and if the mute command is not received, to cause the modulator to modulate a carrier with a first part only of a digital sequence, the controller further being

sensitive to a separate first command signal, and the controller also being responsive to said first command signal by causing the modulator to modulate the carrier with a remainder of the sequence. As pointed out above in connection with claim 1, Reis fail to teach at least these elements of claim 17. Accordingly, claim 17 is not anticipated by Reis and the rejection thereof under § 102(b) should be withdrawn.

Newly added claims 18-20, while of different scope, contain similar recitations as those included in the claims discussed above. As a result, claims 18-20 are not anticipated by Reis and should be allowed.

In addition, it appears that the Examiner's has attempted to read the teachings of Reis onto Applicants' claims by relying entirely on knowledge gleaned from Applicants' own specification. As demonstrated above, this attempt is based upon matching up isolated portions of Reis's disclosure with Applicants' claim elements. Such matching up is either taken out of context or otherwise inappropriate given the divergent teachings of Reis and the present claimed invention. As a result, it is only through hindsight afforded by Applicants' own disclosure that the Examiner can even assert that Reis anticipates the claimed invention. Such hindsight determinations and wholesale incorporation of Applicants' disclosure into the Reis patent are not permitted in applying the provisions of 35 U.S.C. § 102.

Please grant any extensions of time under 37 C.F.R. § 1.136 required in entering this response. If there are any fees due under 37 C.F.R. § 1.16 or 1.17 including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: June 7, 2004